

CLAIMS

1. Method of detecting the blocking of a three-phase
stepper motor featuring three coils, characterised in
5 that, with the stepper motor (M) having its coils con-
nected in star mode, with a common terminal (P), it im-
plements a detection of a said blocking of the rotor of
the motor, by supplying two of the said coils (A, B) with
electricity in such a way that they are traversed by a
10 current, and by measuring the voltage at an end terminal
of the third coil (C), as well as by carrying out a com-
parison of the voltage measured with at least one given
threshold (S1, S2).

2. Method according to Claim 1, characterised in
15 that the said comparison is carried out with a maximum
threshold (S1).

3. Method according to Claim 1, characterised in
that the said comparison is carried out with a minimum
threshold (S2).

20 4. Method according to Claim 1, characterised in
that the coils are supplied from their terminal (A, B, C)
opposite the said common terminal (P), and in that, in
order to carry out the said detection, a first terminal
(A) is taken to a first supply voltage, a second terminal
25 (B) is taken to a second supply voltage, and a third ter-
minal (C) is coupled to a voltage-measuring device.

5. Method according to Claim 1, characterised in
that the said voltage measurement is carried out by sam-
pling.

30 6. Method according to Claim 5, characterised in
that the sampling is carried out offset in time with a
motor-step drive, the said offset being chosen in such a

way as to identify a blocking of the rotor of the motor (M), while avoiding the switching spikes (TP).

7. Method according to Claim 1, characterised in that the said blocking of the motor is the arrival of an element moved by it against an end stop.

8. Method according to Claim 7, characterised in that it implements an adjustment of at least one threshold (S1, S2) as a function of a supply voltage of the motor.

9. Method according to Claim 1, characterised in that, in the event of detection of blocking, the drive to the motor (M) is attenuated, or even dispensed with.

10. Device for detecting the blocking of a three-phase stepper motor, characterised in that it includes:

- an electronic module for supplying the motor in star mode,

- an electronic blocking-detection module for supplying two coils (A, B) of the motor (M) in such a way that they are traversed by a current while a third coil is coupled to a measurement input of the electronic module.

11. Device according to Claim 10, characterised in that the electronic supply module and/or the electronic detection module are controlled by a drive device associated with the stepper motor.